

Title (en)

DOUBLE WALLED INSULATED TUBING AND METHOD OF INSTALLING SAME

Title (de)

DOPPELWANDIGES, ISOLIERTES ROHR UND EINBAUVERFAHREN FÜR DIESES

Title (fr)

COLONNE DE PRODUCTION ISOLEE A DOUBLE PAROI, ET SON PROCEDE D'INSTALLATION

Publication

**EP 0760898 A1 19970312 (EN)**

Application

**EP 95920891 A 19950523**

Priority

- AT 106894 A 19940525
- EP 9501997 W 19950523

Abstract (en)

[origin: WO9532355A1] A double walled insulated tubing string (46) adapted to be hung from a well head (58) has an inner tubing string (21) formed of plural inner tubes and a radially outer tubing string (22) formed of plural outer tubes, the strings being independent of one another apart from axially fixing the strings relative to one another at the top end of the tubing string, although axial fixation may also be provided at the lower end of the tubular strings if desired. An annular insulating gap (30) between the tubing strings (21, 22) is hermetically sealed at both opposing ends and may be evacuated. The inner and outer tubing strings may be run into a well using conventional oil well drilling technology and there is no mechanical connection between the inner and outer tubing strings (21, 22), especially at the connections of the respective inner and outer lengths of tube. To maintain the inside of the outer tubing string (22) free from formation liquids before the inner tubing string (21) is run into the well and sealed against the outer string at its lower end, a temporary plug (31) initially closes the lower end of the outer string and is de-activated before liquid can flow through the thermally insulated dual tubing string (46).

IPC 1-7

**E21B 36/00**; E21B 17/00; F16L 9/18; F16L 59/06

IPC 8 full level

**E21B 17/00** (2006.01); **E21B 33/047** (2006.01); **E21B 36/00** (2006.01); **F16L 9/18** (2006.01); **F16L 59/06** (2006.01)

CPC (source: EP US)

**E21B 17/00** (2013.01 - EP US); **E21B 36/003** (2013.01 - EP US); **F16L 9/18** (2013.01 - EP US); **F16L 59/06** (2013.01 - EP US); **F24T 10/30** (2018.04 - EP US); **F24T 2010/53** (2018.04 - EP US); **F28F 2270/00** (2013.01 - EP); **Y02E 10/10** (2013.01 - EP US)

Citation (search report)

See references of WO 9532355A1

Cited by

RU2487228C1

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB GR IE IT LI NL PT SE

DOCDB simple family (publication)

**WO 9532355 A1 19951130**; AT 404386 B 19981125; AT A106894 A 19980315; AT E197336 T1 20001115; BR 9507757 A 19970923; CA 2190971 A1 19951130; CA 2190971 C 20001031; CN 1057364 C 20001011; CN 1149902 A 19970514; DE 69519292 D1 20001207; DE 69519292 T2 20010517; EP 0760898 A1 19970312; EP 0760898 B1 20001102; MX 9605778 A 19980531; RU 2144975 C1 20000127; US 5862866 A 19990126

DOCDB simple family (application)

**EP 9501997 W 19950523**; AT 106894 A 19940525; AT 95920891 T 19950523; BR 9507757 A 19950523; CA 2190971 A 19950523; CN 95193226 A 19950523; DE 69519292 T 19950523; EP 95920891 A 19950523; MX 9605778 A 19950523; RU 96124367 A 19950523; US 73766996 A 19961120